F

AMENDMENT UNDER 37 C.F.R. § 1.116

U.S. Application No.: 09/810,603

Our Ref.: Q62420 Art Unit: 2859

forecasting tire tread wear on the a tire based on the increase in temperature of the tread surface part of the tire or based on the a temperature of the tread surface part after increasing the temperature of the tread surface part.

12. (Amended) A tire tread wear forecasting apparatus that forecasts the tread wear based on a temperature of a tread surface part of a tire after causing the tire to come in contact with, and to be run on, a road surface, in order to increase the temperature of the tread surface part, said tire tread wear forecasting apparatus comprising:

a tire support that supports the tire so that the tire can rotate;

a road surface that contacts the tire;

means for driving at least one of the tire and the road surface in order to cause the tire to rotate;

means for measuring, without contact, the temperature of the tread surface part and for discerning a temperature distribution of the tread surface part from the measured temperature, means for forecasting tread wear based on information from said measuring means, and a memory device for recording multiple temperature measurement results, and a calculating device for calculating temperature differences of the temperature measurement results from a first temperature measurement and the temperature measurement results from a second temperature measurement at temperature measurement locations.

AMENDMENT UNDER 37 C.F.R. § 1.116

U.S. Application No.: 09/810,603

13. (Amended) A tire tread wear forecasting apparatus that forecasts the tread wear based on a temperature of a tread surface part of a tire after causing the tire to come in contact with, and to be run on, a road surface, in order to increase the temperature of the tread surface part, said tire tread wear forecasting apparatus comprising:

Our Ref.: Q62420

Art Unit: 2859

a tire support that supports the tire so that the tire can rotate;

a road surface that contacts the tire;

means for driving at least one of the tire and the road surface in order to cause the tire to rotate;

means for measuring, without contact, the temperature of the tread surface part and for discerning a temperature distribution of the tread surface part from the measured temperature, means for forecasting tread wear based on information from said measuring means, an inputter that inputs a length of a tire contact surface; and

a compensator that corrects at least the measured temperature based on the length of the tire contact surface that has been input by the inputter.

15. (Amended) A tire tread wear forecasting apparatus that forecasts the tread wear based on a temperature of a tread surface part of a tire after causing the tire to come in contact with, and to be run on, a road surface, in order to increase the temperature of the tread surface part, said tire tread wear forecasting apparatus comprising:

a tire support that supports the tire so that the tire can rotate;

a road surface that contacts the tire;

AMENDMENT UNDER 37 C.F.R. § 1.116

U.S. Application No.: 09/810,603

Our Ref.: Q62420 Art Unit: 2859

means for driving at least one of the tire and the road surface in order to cause the tire to rotate;

means for measuring, without contact, the temperature of the tread surface part and for discerning a temperature distribution of the tread surface part from the measured temperature, and

means for forecasting tread wear based on information from said measuring means, and means for cooling the tire.

16. (Amended) A tire tread wear forecasting apparatus that forecasts the tread wear based on a temperature of a tread surface part of a tire after causing the tire to come in contact with, and to be run on, a road surface, in order to increase the temperature of the tread surface part, said tire tread wear forecasting apparatus comprising:

a tire support that supports the tire so that the tire can rotate;

a road surface that contacts the tire;

means for driving at least one of the tire and the road surface in order to cause the tire to rotate;

means for measuring, without contact, the temperature of the tread surface part and for discerning a temperature distribution of the tread surface part from the measured temperature, and

means for forecasting tread wear based on information from said measuring means, and means for heating the road surface.